

Organismic & Evolutionary Biology (BILD 3) – Winter quarter 2012

BILD 3 deals with the living world at the level of whole organisms, populations, species assemblages, ecosystems, biomes, and the biosphere. BILD3 serves as an introduction to the fields of evolution, behavior, and ecology. A key focus of the course will be on evolution. An understanding of evolutionary processes provides insight into why there are so many different kinds of living things, how they are related to one another, and how these organisms interact with each other to produce complex ecosystems. BILD3 also provides a basis for understanding human impacts on global climate, species extinctions, environmental alterations, pest outbreaks, emergent diseases, and ecosystem services.

<u>Date & day</u>	<u>Lecture number & topic</u>	<u>Chapter in Campbell</u>	
Jan	9 (M)	1. Introduction: course logistics and overview	
	11 (W)	2. History of evolutionary thought	22
	13 (F)	3. Evidence for evolution	22
	18 (W)	4. Evolution of populations I: natural selection	23
	20 (F)	5. Evolution of populations II: Hardy-Weinberg equilibrium	23
	23 (M)	6. Evolution of populations III: evolutionary forces	23
	25 (W)	7. Speciation	24
	27 (F)	8. History of life	25
	30 (M)	MIDTERM 1	
	Feb	1 (W)	9. Phylogenetic trees
3 (F)		10. Bacteria, Archaea, viruses	27
6 (M)		11. Unicellular eukaryotes	28
8 (W)		12. Plants I: colonization of land / non-Angiosperms	29
10 (F)		13. Plants II: Angiosperms	30
13 (M)		14. Fungi	31
15 (W)		15. Animals I: invertebrates	32-33
17 (F)		16. Animals II: vertebrates	34
22 (W)		MIDTERM 2	
24 (F)		17. Physical environment & biomes	52
27 (M)	18. Population ecology I: exponential & logistic growth	53	
29 (W)	19. Population ecology II: age-structured populations	53	
Mar	2 (F)	20. Population ecology III: life histories	53
	5 (M)	21. Community ecology I: biotic interactions	54
	7 (W)	22. Community ecology II: diversity	54
	9 (F)	23. Ecosystem ecology I: net primary productivity	55
	12 (M)	24. Ecosystem ecology II: water and carbon cycles	55
	14 (W)	25. Ecosystem ecology II: nutrient (NP) cycles	55
	16 (F)	26. Conservation	56
Mar 23 (F)	FINAL EXAM (1130 am – 230 pm)		

Professor

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Office hours: M&W 2-3 or by appointment

Contact: The best way to contact me is by email (dholway@ucsd.edu). On all emails PLEASE put BILD 3 in the subject line to indicate that your email pertains to this course. If you email me about anything regarding your status in the course, then please include your name and PID. Because there are hundreds of students in this course, I can't always individually answer questions about course content by email (especially right before exams). Attend lectures, discussion sections, and office hours, if you have questions regarding the course material.

Textbook: Campbell (2011) *Biology*. Pearson, San Francisco. 9th edition. We will cover material from Unit 4 (Chapters 22-25), Unit 5 (Chapters 26-34), and Unit 8 (Chapters 52-56). The publisher offers various supplemental materials including a CD, a web site called *MasteringBiology*, and a book of exercises. Students just beginning the BILD series may find these instructional tools useful, but they are *not required* for BILD3. Used copies of the text may be available at the UCSD Bookstore. Three copies of the text will be placed on reserve at Geisel Library during the start of the quarter.

Lectures: It is your job to attend lectures (MWF 100 - 150 in Peterson 110). Lectures are mandatory and contain important announcements. Attending lectures is key to mastering the material. Do not expect to miss lectures consistently and be able to do well in the course. Lecture notes will be posted on Ted before each lecture, ***but essential material will be presented in class that does not appear on web-posted notes.***

Exams: There are two midterms, each worth 100 points, and a final exam worth 200 points. All questions will be multiple choice; we will provide Scantron sheets for each exam. **We will check photo identification at the exam**, so please bring a student ID or driver's license. Midterms will be given in class and will be based on material for that section of the course up to the lecture preceding the exam. The final will be cumulative. Scantron sheets and answer keys will be available after grading is completed, but the exams themselves will not be returned. You are encouraged to attend section to discuss exam questions that you missed. It will be possible to study exams in office hours or in section. Questions concerning exams are dealt with in discussion sections, office hours, or by emailing a course tutor.

There are no regrades and no make-up exams. If you miss a midterm or final exam, then you will be required to provide official documentation of an unavoidable emergency (e.g., serious illness, etc.) Without such documentation, you will receive no points for that exam. For missed midterms **and** with valid documentation, the proportion of your grade that is based on your final exam will be increased to cover the midterm that was missed. For a missed final exam **and** with valid documentation, you will be expected to take the final orally or you will receive an incomplete for the course.

Lecture notes will be available on Ted (<http://Ted.ucsd.edu>) by the end of the business day preceding each lecture. Additional course materials will also be posted on Ted, including the syllabus, grade distributions, answer keys for the midterms, important announcements, and other information. If you are registered for the course (or if you are on the wait list), then you should have access to the course web site. Instruction on how to access Ted can be found at the following: <http://acms.ucsd.edu/units/iwdc/password.shtml>. Concurrent enrollment (Extension) students are not added automatically. Extension students should obtain a registration token from Extension's student services or the ACMS Help Desk and register for an account. More information is at the following: <http://sdacs.ucsd.edu/~icc/ce.php>. If you have questions concerning how to access course materials on Ted, then please contact Academic and Computing Services: <http://acms.ucsd.edu/units/iwdc/students.shtml>.

Grading: Your final letter grade will be based on your TOTAL number of points. Letter grades will be based on a curve; approximately the top 20% of students will receive A grades; the next 30% of students will receive B grades; the next 40% of students will receive C grades or lower. Thus, if you earn the median score (half of your classmates have higher scores and half have lower scores) your score will fall at (or near) the B- / C+ cutoff. Students earning less than 50% can expect to receive F grades unless there are mitigating circumstances. The final course curve is based on the students that are enrolled in the course at the end of the quarter. I do give plus and minus grades but only on the final course grades. The pluses and minuses do not make the curve easier, they only help to differentiate the scores within the ranges above. Please note that the university will not allow us to change a letter grade after they are turned in except in cases of demonstrable clerical error.

Discussion sections: Tutor-led sections are not required, but you are urged to attend to discuss lecture material, exams, and other topics with your course tutors. Sections will not meet during the first week. See TritonLink for information regarding times and locations of sections.

Can I use an old edition of the text? That is up to you. I will only use the 9th edition. Previous editions are similar but not identical. If you already own an older edition, my suggestion is that you compare your copy to the 9th edition, and decide if the editions are similar enough for you to live with. Again, the material you are responsible for is the 9th edition.

Clickers: We will **NOT** be using clickers in this course. During lecture, however, I will ask you practice exam questions; these questions are not for credit but will serve as a way to test your knowledge of the material.

Wait list: If you are on the wait list for this class, then you will be automatically added if space becomes available. If you have any concerns, please contact Biology Student Affairs at 858-534-0557 or email question@biology.ucsd.edu.

Cheating: Don't. Any student caught cheating will be handed over to the Academic Integrity Coordinator, which reports directly to the Dean of the student's college. For more information: <http://students.ucsd.edu/academics/academic-integrity/policy.html>

Self-guided field trip to the Scripps Coastal Reserve: This optional assignment is worth 10 points. We will provide more information regarding this assignment after lecture 17.

OSD students: If you need testing accommodation for this class, please give a copy of your OSD Authorization for Testing Accommodation (AFTA) form to Biology Student Affairs. Usually they will schedule your accommodation, and you will need to fill out forms. However, if you need specialized equipment, arrangements may need to be made with OSD rather than the Biology office. You also need to coordinate scheduling of exams with me. All of these arrangements should be made within the first two weeks of the quarter. Please note that the Biology office is closed in the evenings.

How to excel in this class: Here is what I would do if I were a student: 1) **go to lecture** and take notes, 2) use an outline format, don't try and write down every word, 3) go over the on-line lecture notes within the next day or so and fill in details missed in lecture. My recommendation is that you rely more on your own good notes rather than the posted notes (use them as a reference only). It is too easy to just stare at the posted notes without really digesting the material. If you force yourself to write your own notes, however, you force yourself to summarize, organize, and restate things in your own words.

Bring any questions to discussion section, contact course tutors through email or office hours, or come to my office hours. Office hours are the best place to ask complex questions – you will get a much more thorough answer. Don't wait until the last minute. You should have a clear understanding of all the examples - why was each example important? Use the text to reinforce concepts discussed in lecture. Anything in the text is fair game for exams, but the lecture material will be emphasized.

Problems? If you have serious medical or personal problems during the quarter, the university does allow medical withdrawals. You need to contact the Biology Student Affairs at 858-534-0557 or email question@biology.ucsd.edu.

BILD 3 tutors:

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